

FACT SHEET

For Additional Information Contact:
Bureau of Medicine and Surgery MED26
2300 E Street NW
Washington, DC 20372-5300
Phone: 202-762-0472
Fax: 202-762-0976
Email: dmryan@us.med.navy.mil

U.S. Naval Medical Research Unit No. 2

Jakarta, Indonesia



The U.S. Naval Medical Research Unit No. 2 (NAMRU-2) is located in Jakarta, Indonesia. NAMRU-2 supports the Navy and Fleet Marine Forces in the Pacific Theater by studying military relevant infectious disease threats in both active duty and civilian populations. There is a satellite laboratory in Jayapura, which is located in Indonesia's eastern most province, Papua. Current research includes identifying and establishing sites for measuring the effectiveness of new vaccines and drugs used in the treatment and prevention of diseases such as malaria, dengue and dysentery. The growing number of disease agents that no longer respond to conventional therapies highlights the importance of this work.

NAMRU-2 provides the Navy and Marine Corps with a continued forward presence that combines virology, microbiology, epidemiology, immunology parasitology, entomology, and clinical medicine into a comprehensive capability to study tropical diseases where they occur. Only in this environment can new preventive measures and treatments be tested and evaluated to improve the health of the local civilian population and the operational readiness of deployed US Forces.

NAMRU-2 has strong ties with the Indonesia Ministry of Health, the Indonesian Center for Disease Control, and the Indonesian National Institute of Health Research and Development. These research affiliations, coupled with a high incidence of tropical infectious disease problems in reasonably accessible areas, have led to an increasing roll for NAMRU-2 in joint US-Indonesia endeavors.

NAMRU-2 has expanded surveillance efforts to other countries in Southeast Asia in response to continuing disease threats such as malaria, dengue, hepatitis, HIV and Japanese Encephalitis, as well as new or re-emerging infectious disease agents like *V. cholerae* 0139, and multi-drug resistant *M. tuberculosis*. In order to accomplish this sizable undertaking, NAMRU-2 has established research collaborations and surveillance networks in Vietnam, Laos, Singapore, Philippines, Thailand and Cambodia. In Phnom Penh, Cambodia, NAMRU-2 has just opened, outfitted and staffed a satellite laboratory to conduct regional infectious disease outbreak surveillance and diagnostic laboratory support. NAMRU-2, through a country agreement with Cambodia, is the only U.S. military organization currently allowed to work in this country.

First established in conjunction with the Rockefeller Institution on the island of Guam in 1942, NAMRU-2 has continually adapted to the geo-political changes that have swept Southeast Asia, moving from Taipei, Taiwan to its new location in Indonesia. The Command has moved several times since its creation: Taipei, Taiwan in 1955; Vietnam in 1965 (Detachment); Jakarta, Indonesia in 1970 (Detachment); Manila, Philippines in 1979; and finally, Jakarta with the transfer of all command functions in 1991. This followed the reclassification of the Manila facility as a Detachment and then its closure in June 1994.

For more information on NAMRU-2: <http://www.nmri.nnmc.navy.mil>



Research Areas

Parasitic Diseases

- Measuring drug resistance to malaria parasites
- Determining correlates of protective immunity to malaria
- Conducting anti-malaria drug and vaccine efficacy trials

Emerging Diseases

- Collaborating with local and regional health officials to establish a computer-linked network (EWORS), for detection and response to emerging pathogens
- Conducting epidemiologic investigations of regional disease outbreaks

Viral Diseases

- Evaluating dengue vaccines
- Determining the immune basis for development of dengue hemorrhagic fever
- Conducting surveillance for Hantavirus disease, Chikungunya virus infections and Influenza
- Characterizing HIV-1 viruses

Bacterial Diseases

- Conducting surveillance for V cholerae 01, V cholerae 019, Shigella, Campylobacter and enterotoxigenic E coli
- Conducting case-control diarrheal disease study

Examples of Accomplishments

- Demonstrated safety and efficacy of daily primaquine to prevent malaria
- Demonstrated effective new treatments for drug resistant malaria
- Documented that leptospirosis is a significant cause of jaundice in the region
- Completed a two-year cohort study of dengue hemorrhagic fever
- Genotyped HIV-1 samples from Hong Kong, Malaysia, Vietnam, Cambodia, and the Philippines
- Initiated a 2,700 volunteer cohort study to develop a potential site for evaluation of a future dengue vaccine
- Detected and mapped chloroquine resistant vivax malaria in Pacific Rim
- Established a computer-linked disease surveillance network throughout Indonesia
- Described the epidemic potential and unique riverine ecology of HEV
- Evaluated the sensitivity and specificity of two rapid tests for dengue infection
- Completed a field efficacy trial (67,000 subjects) of a live cholera vaccine
- Demonstrated efficacy of currently accepted therapies for severe typhoid fever and cholera, and for prevention of typhoid fever by immunization

Examples of Operational Support

- Documented a 47% attack rate of Norwalk virus on WESTPAC ship
- Supported enteric disease investigations during Cobra Gold 90, 95, and 98 and Balance Torch 94 and 96 in Thailand. Helped document quinolone resistance.
- Conducted surveillance for disease threats to JTFF personnel in Indochina
- Identified the threat of australasian virus to US forces deployed to the region (Operation Tandem Thrust)
- Conducted enteric disease surveillance and laboratory support for CARAT 95 and CARAT 96